

IN THE CLAIMS

Amend Claim 1 to recite the embodiment of present Fig. 1 as follows:

1. (Currently Amended) Method for forming a separator plate for a fuel cell, which separator plate has a number of projecting sections, comprising
locating a metal plate, having opposed first and second surfaces, between opposed first and second dies,
a first surface of the first die, facing the first surface of the plate, having a first central section and a first perimeter section, the first central section having recessed sections, and the first perimeter section forming a perimeter about the first central section, the first die having a single component for defining both the first central section and the first perimeter section,
a second surface of the second die, facing the second surface of the plate, having a second central section and a second perimeter section, the second central section defining a cavity, and the second perimeter section forming a perimeter about the second central section, the second die having a single component for defining both the second central section and the second perimeter section;
pressing the first die and the second die together to press a perimeter region of the plate to hold the plate stationary and seal a perimeter about the cavity; and
while the cavity perimeter is sealed forming the projecting sections in the separator plate by pressing [[a]] the first surface of the metal plate onto a die having a number of the recessed sections with the aid of a pressurized fluid exerting pressure upon the second surface of the metal plate or by pressing the die onto the metal plate supported by pressurized fluid, the recessed sections in the die corresponding to the projecting sections which are to be formed in the metal plate, in order to obtain the separator plate having the projecting sections.

2. (Previously Presented) Method according to Claim 1, wherein the pressure of the fluid is selected to be sufficiently high for the metal plate to be pressed onto the die over its entire surface.

3. (Previously Presented) Method according to Claim 1, wherein a calibration pressure is selected for the pressure of the fluid.

4. (Previously Presented) Method according to Claim 1, wherein the pressure of the fluid is selected to be between 250 and 6000 bar (25 and 600 MPa).

5. (Previously Presented) Method according to Claim 1, wherein the metal plate is first placed against the die, and the metal plate is then pressed onto the die by the pressurized fluid.

6. (Currently amended) Method according to Claim 1, wherein the metal plate is first placed under a preliminary pressure by the fluid, and then the die is pressed onto the metal plate and the fluid is pressurized fluid comprises a member selected from the group consisting of a lacquer, a polymer, an electrolyte, a glass, a salt, and combinations thereof, and

wherein a layer of the pressurized fluid is deposited onto the metal plate while pressing the first surface of the metal plate onto the recessed sections.

7. (Previously Presented) Method according to Claim 1, wherein a membrane is placed between the metal plate and the fluid.

8. (Previously Presented) Method according to Claim 1, wherein the metal plate is made from a readily deformable metal.

9. (Previously Presented) Method according to Claim 8, wherein the readily deformable metal has a deformability corresponding to a uniform elongation at break of at least 20%.

10. (Previously Presented) Method according to Claim 1, wherein the plate is at room temperature during the pressing operation.

11. (Previously Presented) Method according to Claim 1, wherein the plate is at elevated temperature during the pressing operation.

12. (Previously Presented) Method according to Claim 1, wherein the thickness of the metal plate prior to the deformation is selected to be between 0.05 and 0.40 mm.

13. (Previously Presented) Method according to Claim 1, wherein, at the same time as the projecting sections are being pressed into the metal plate, the metal plate is cut into a desired shape and size.

14. (Previously Presented) Separator plate having a number of projecting sections, produced using the method of Claim 1, wherein the separator plate is formed from a readily deformable metal plate.

15. (Previously Presented) Separator plate according to Claim 14, wherein the readily deformable metal has a deformability corresponding to a uniform elongation at break of at least 20%.

16. (Previously Presented) Separator plate according to Claim 14, wherein the thickness of the separator plate is between 0.05 and 0.40 mm at the undeformed sections of the plate.

17. (Previously Presented) Separator plate according to Claim 14, wherein the rounding radius of the transitions in the plate is at least equal to the thickness of the undeformed sections of the plate.

18. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.03 < d/w < 1.2$ if the plate is deformed at room temperature.

19. (Currently Amended) Separator plate having a number of projecting sections,

wherein the projecting sections are surrounded by a substantially planar section of the separator plate,

the projecting sections having a substantially repeating pattern with a pitch w and a depth d , where $0.25 < d/w < 2.4$,

wherein the substantially repeating pattern is a serpentine pattern having semicircular transitions and a plurality of parallel sections.

20. (Previously Presented) Separator plate according to Claim 19, wherein the thickness of the separator plate is between 0.05 and 0.40 mm at the undeformed sections of the plate.

21. (Previously Presented) Method according to claim 1, wherein the pressure of the fluid is selected to be between 500 and 1000 bar (50 and 100 MPa).

22. (Previously Presented) Method according to claim 1, wherein the pressure of the fluid is selected to be between 1000 and 6000 bar (100 and 600 MPa).

23. (Previously Presented) Method according to claim 1, wherein the pressure of the fluid is selected to be between 1500 and 6000 bar (150 and 600 MPa).

24. (Previously Presented) Method according to claim 1, wherein the pressure of the fluid is selected to be between 2000 and 6000 bar (200 and 600 MPa).

25. (Currently Amended) Method according to Claim [[1]] 44, wherein ~~a membrane is placed between the metal plate and the fluid~~, the membrane is provided with a coating, and wherein the method further comprises transferring the coating from the membrane to in order to simultaneously coat the metal plate.

26. (Previously Presented) Method according to Claim 1, wherein the metal plate is made from a readily deformable metal selected from the group consisting of low-carbon steel, ultralow-carbon steel, aluminium, stainless steel or titanium.

27. (Previously Presented) Method according to Claim 1, wherein the plate comprises carbon steel and is at 500-1000°C during the pressing operation.

28. (Previously Presented) Method according to Claim 1, wherein the plate comprises aluminium and is at 100-550°C during the pressing operation.

29. (Previously Presented) Method according to Claim 1, wherein the plate comprises stainless steel and is at 600-1300°C during the pressing operation.

30. (Previously Presented) Method according to Claim 1, wherein the thickness of the metal plate prior to the deformation is selected to be between 0.05 and 0.20 mm.

31. (Currently Amended) Separator plate having a number of projecting sections, produced using the method of Claim 1, wherein the separator plate is formed from a readily deformable metal plate made from a member of the group consisting of low-carbon-steel, ultralow-carbon steel, aluminium, stainless steel and titanium.

the plate has a repeating pattern of projecting sections projecting above a base plane and between the projecting sections are portions of the plate on the base plane and the plate perimeter is on the base plane.

32. (Previously Presented) Separator plate according to Claim 14, wherein the thickness of the separator plate is between 0.05 and 0.20 mm at the undeformed sections of the plate.

33. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.1 < d/w < 0.5$ if the plate is deformed at room temperature.

34. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.2 < d/w < 0.5$ if the plate is deformed at room temperature.

35. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.03 < d/w < 2.4$ if the plate is deformed at high temperature.

36. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.2 < d/w < 1.0$ if the plate is deformed at high temperature.

37. (Previously Presented) Separator plate according to Claim 14, wherein the projecting sections have a repeating pattern with a pitch w and a depth d , where $0.4 < d/w < 1.0$ if the plate is deformed at high temperature.

38. (Previously Presented) Separator plate according to Claim 19, wherein the thickness of the separator plate is between 0.05 and 0.20 mm at the undeformed sections of the plate.

39. (New) Method for forming a separator plate for a fuel cell, which separator plate has a number of projecting sections, comprising

locating a metal plate, having opposed first and second surfaces, between opposed first and second dies,

a first surface of the first die, facing the first surface of the plate, having a first central section and a first perimeter section, the first central section having a plurality of recessed sections, and the first perimeter section forming a perimeter about the first central section, the first die having separate components for defining the first central section and the first perimeter section, respectively,

a second surface of the second die, facing the second surface of the plate, having a second central section and a second perimeter section, the second central section defining a cavity, and the second perimeter section forming a perimeter about the second central section, the second die having a single component for defining both the second central section and the second perimeter section;

pressing the first die and the second die perimeter sections together to press a perimeter region of the plate to hold the plate stationary and seal a perimeter about the cavity; and

while the cavity perimeter is sealed forming the projecting sections in the separator plate by pressing the first surface of the metal plate onto the recessed sections with the aid of a pressurized fluid exerting pressure upon the second surface of the metal plate, the recessed sections in the die corresponding to the projecting sections which are to be formed in the metal plate, to obtain the separator plate having the projecting sections,

wherein, after sealing the perimeter about the cavity, the metal plate is first placed under a preliminary pressure by the fluid, and then the first die first central section having the plurality of recessed sections is pressed onto the metal plate and the fluid is pressurized, wherein after sealing the perimeter about the cavity but prior to contacting the plate with the plurality of recessed sections, the lower surface of the plate is pressurized to cause the plate to bulge to form a preliminary elongation towards the die with the plurality of recessed sections.

40. (New) The method of Claim 39, wherein, after sealing the perimeter about the cavity but prior to contacting the plate with the plurality of recessed sections, the lower surface of the plate is pressurized to cause the plate to bulge as a single convex form towards the die with the plurality of recessed sections.

41. (New) The method of Claim 39, wherein the pressurized fluid comprises a member selected from the group consisting of a lacquer, a polymer, an electrolyte, a glass, a salt, and combinations thereof, and

wherein a layer of the pressurized fluid is deposited onto the metal plate while pressing the first surface of the metal plate onto the recessed sections.

42. (New) The method of Claim 39, wherein prior to forming the projecting sections, while holding the metal plate stationary, said first and second surfaces of the plate are lying in a respective single plane between the first die and the second die,

wherein said first and second surfaces of the plate are respectively not closer to the second central section of the second die than the respective single plane while forming the projecting sections.

43. (New) Method according to Claim 39, wherein a membrane is placed between the metal plate and the fluid.

44. (New) Method for forming a separator plate for a fuel cell, which separator plate has a number of projecting sections, comprising:

forming the projecting sections in the separator plate by pressing a metal plate onto a die having a number of recessed sections with the aid of a pressurized fluid or by pressing the die onto the metal plate supported by pressurized fluid,

the recessed sections in the die corresponding to the projecting sections which are to be formed in the metal plate, to obtain the separator plate having the projecting sections, wherein a membrane is placed between the metal plate and the fluid.

45. (New) Method according to Claim 44, wherein the membrane comprises a polymer electrolyte membrane placed between the metal plate and the fluid.

46. (New) Method according to Claim 25, wherein the membrane comprises a polymer electrolyte membrane placed between the metal plate and the fluid.